Apart from associations leading to usurpation of foraging sites or food by drongos, woodpeckers were also followed by birds (including drongos) for insects that were disturbed by them in their process of moving about on the tree trunk or branches. Racket-tailed drongos, red-vented bulbuls *Pycnonotus cafer*, grey-headed starlings *Sturnus malabaricus*, red-whiskered bulbuls *Pycnonotus jocosus* and jungle babblers *Turdoides striatus* were seen following the lesser golden-backed woodpecker *Dinopium benghalense* and little scaly-bellied green woodpecker *Picus xanthopygaeus* foraging on termites, sometimes as close as a metre or so from the woodpeckers. Though the woodpeckers generally never reacted to the presence of these birds, on one occasion I noticed a lesser golden-backed woodpecker lunging at a red-vented bulbul that strayed quite close to it.

Woodpeckers tolerate occasional piracy by the aggressive drongos because of the advantages they enjoy in the form of protection from predators and early warning signals, which they receive from other birds in a mixed foraging flock (Sullivan 1984, Hogstad 1991). I have seen bronzed drongos chasing shikra (*Accipiter badius*) and other raptors that stray within the proximity of mixed flocks.

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8. EXPLOITATION OF SEA TURTLES ALONG THE SOUTHEAST COAST OF TAMIL NADU, INDIA

(*With one text-figure*)

Five species of sea turtles, the leatherback *Dermochelys coriacea*, hawksbill *Eretmochelys imbricata*, olive ridley *Lepidochelys olivacea*, loggerhead *Caretta caretta* and green turtle *Chelonia mydas* occur in the Indian seas. All of them are found along the southeast coast, especially in the Gulf of Mannar (Kar and Bhaskar 1995). Turtle fishing was practised in this region for ages, and chelonians were exported to Sri Lanka and other countries until a couple of decades ago (Agastheesapillai and Thiagarajan 1979, Frazier 1980). In the present paper, we report the exploitation and some aspects of the ethnozoology of sea turtles along the southeast coast of Tamil Nadu, India. We surveyed most of the coastal villages covering the entire southeast coast (*c.* 250 km; Fig. 1), from Cape Comorin (now Kanya Kumari; 8° 4' 40" N, 77° 33' 4" E) to Dhanushkodi (9° 9' 9" N, 79° 26' 46" E) during November 2001. We interviewed the fishermen for information on the occurrence of turtles, their common names and exploitation by locals. Village markets and garbage dumps were also checked for live turtles or shells to quantify the exploitation.

Altogether, we surveyed 29 localities, and obtained 48 cases of sea turtle exploitation in 13 localities. This includes all species except the loggerhead. About 94% of the turtles exploited

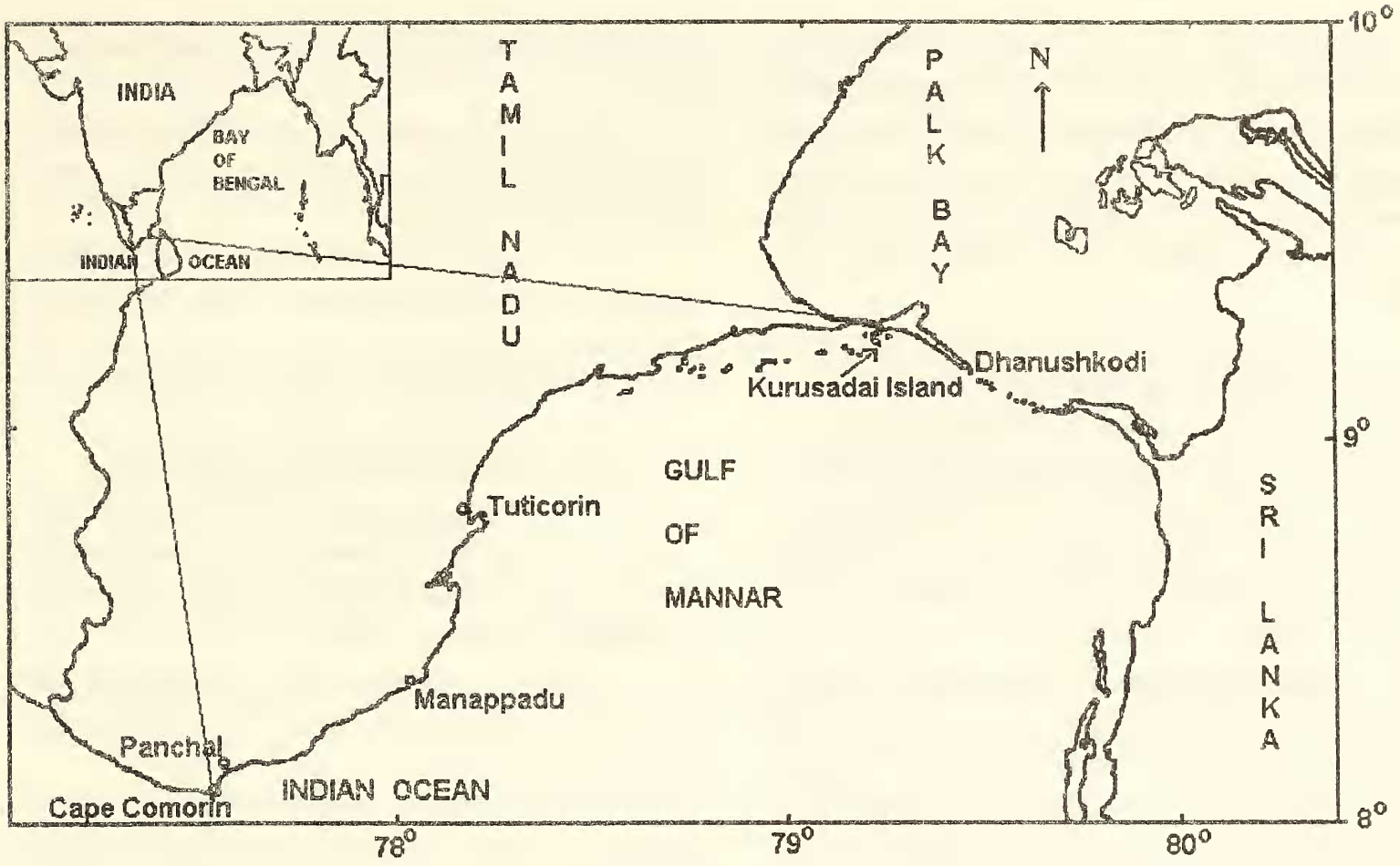

Fig. 1: Map showing the southeastern coast of Tamil Nadu, India

were olive ridleys (47.9%) and green turtles (45.8%). Agastheesapillai and Thiagarajan (1979) reported that the green turtle formed *c.* 89% of all turtles caught in the Gulf of Mannar and Palk Bay during 1971-76. However, the present study shows that the proportion of green turtles caught declined from *c.* 90% to 46%, while on the other hand, the olive ridley increased substantially from <10% to 48%. The reduction in the green turtle catch could be due to overexploitation in the past. Before 1950, other species were seldom consumed (Kuriyan 1950). This indicates that the green turtle has been depleted beyond sustainable level, and the locals are forced to utilise other species such as the olive ridley. Local fishermen reported that they would prefer the green turtle to other species for food. The green turtle is known as "theen aamai" (theen = honey, aamai = turtle) in this part of the country, indicating a preference for this species. Turtle meat price ranged from Rs. 75-150 per kg, and the eggs were priced at Rs. 0.75-2.00 per egg. It is believed that turtle egg, meat and blood cure diseases such as tuberculosis and piles.

Other species such as the leatherback turtle were exploited on availability. According to Das (1995), the leatherback becomes poisonous during certain seasons along the southern coast of Sri Lanka. However, the species most dreaded by the locals on the southeastern coast of India is the hawksbill turtle, and is not consumed due to the poisonous nature of its meat (Das 1995). As reported by Kar and Bhaskar (1995), the villagers still remember the death of 9 persons in 1979 after consuming the hawksbill in Manapaddu near Tuticorin.

Various uses of the sea turtles are given in Das (1995). Oil extracted from the leatherback is used for boat maintenance. Hawksbill shell is preserved for the tortoiseshell industry. In certain villages, the carapace of the olive ridley and green turtle is used as a container during dyeing of

boat sails. The dye is obtained from crushed tamarind husk and seeds. According to the elderly fishermen, the fat remaining in the shell acts as a fixative. Until a few years ago, this practice was common along the coast. Now, plastic containers and synthetic dyes have replaced the turtle shell.

It appears that the current exploitation of sea turtles in southeastern Tamil Nadu is for subsistence, and fishermen do not go exclusively for hunting sea turtles. However, turtles entangled in the net, and remaining alive, are taken for consumption. Turtles usually get caught in ray fish nets, locally known as 'tirukku valai' (tirukkai = ray fish, valai = net). This is a type of gillnet similar to the 'pachu valai' described by Kuriyan (1950). The length and width of the nets commonly used in the region are 54 m and 6 m respectively. The net is made up of multifilament polymer, and the mesh size varies from 15 to 22 cm. Fishermen reported that six olive ridleys got entangled in a net (324 sq. m) spread for about 10 hrs during mid-November 2000.

All species of turtle are known as 'aamai' in the local language, Tamil. The residents of this area are aware of the occurrence of at least four species of sea turtles, and identify them largely by colour, size and general appearance. Each species has more than one local name, as given below.

Olive ridley sea turtle *Lepidochelys olivacea*

i. Yeth aamai: Yeth = that comes up; the turtle that comes up, and is often found nesting.

ii. Panchal aamai: Panchal is a coastal village near Kanya Kumari, where this species is reportedly common.

iii. Vakkatta aamai: Vakkatta = poor; the turtle yields little meat compared to other species, and is the smallest marine turtle in the region.

Green turtle *Chelonia mydas*

i. Peruthalai/Perunthalai aamai: Peruthalai/ perunthalai = largeheaded; the turtle with a large head.

ii. Theen aamai: Theen = honey; locals report that the meat of this species tastes good, and they relish eating it.

iii. Panguni aamai: Panguni is a Tamil calendar month (≈March-April), when this turtle is commonly seen.

iv. Per aamai: Per = big; large turtle.

Hawksbill turtle *Eretmochelys imbricata*

i. Yeli/Yelithalai aamai: Yeli = rat, yelithalai = rat head; the turtle whose head resembles a rodent's head — the upper jaw of the turtle is curved like that of a rodent.

ii. Alungu aamai: Alungu = pangolin; the turtle with overlapping scutes like the pangolin *Manis crassicaudata*.

iii. Kili mookku aamai: Kili = parakeet, mookku = beak; the turtle with a curved upper jaw like the beak of a parrot or parakeet.

Leatherback turtle *Dermochelys coriacea*

i. Panni aamai: Panni = pig; turtle that resembles a pig, perhaps due to its size and colour.

ii. Oongal aamai: Oongal = dolphin; the turtle that looks like a dolphin.

iii. Ezhuvari aamai: Ezhu = seven, vari = line or keel; the turtle that has seven lines or keels on the shell.

iv. Ooduvetti aamai: Oodu = run, vetti = cut; according to the locals, when this species is moving, its strong flippers can injure the person disturbing or handling it.

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9. RECORD OF THE PAINTED KALOULA *KALOULA TAPROBANICA* IN ANDHRA PRADESH

The painted kaloula, *Kaloula taprobanica* Parker, is a medium sized (5.0-8.0 cm) frog that prefers urban areas and open forests (Daniels 1997). The species is reported from Assam, West Bengal, Bihar, Madhya Pradesh, Orissa, Karnataka and Tamil Nadu (Dutta 1997). The species has not been reported from Andhra Pradesh, though reported from its four bordering states (Orissa and Madhya Pradesh in the north, Karnataka to the west and Tamil Nadu to the south) (Daniel 2002, Dutta 1997).

During our studies on the herpetofauna in Sriharikota Island, Nellore district, Andhra Pradesh, we found the species to be one of the most common frogs on the Island. Sriharikota borders Tamil Nadu, and records of the species in this State are from its eastern areas (Daniels 1997). Specimens have also been collected from the suburbs of Chennai (Tambaram) in 1966 (Giri *et al.* 2001) *c.* 80 km south of Sriharikota. Though close to Chennai, our record of the species in Sriharikota deserves attention, as the species has not been recorded from Andhra Pradesh. Additionally, the record is significant due to the insular nature of the landmass, with the Bay of Bengal to the east and Pulicat Lake on its northern, eastern and southern borders. There is also a possibility of the species occurring in other coastal areas to the north of Sriharikota in Andhra Pradesh.

A voucher specimen has been deposited in the BNHS Collection, Regn No. BNHS 4190.

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